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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,032	01/15/2002	Andreas Johannes Gerrits	NL 010054	4253

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EXAMINER	
WOZNIAK, JAMES S	

ART UNIT	PAPER NUMBER
2626	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/047,032	GERRITS, ANDREAS JOHANNES	
	Examiner	Art Unit	
	JAMES S. WOZNIAK	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/12/2008 (BPAI decision)*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 January 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. In response to the BPAI decision from 2/12/2008 *(i.e., statement that Chai (U.S. Patent: 6,137,915) fails to teach a splitter/combiner, BPAI decision, Pages 6-7)*, the previous grounds of rejection have been withdrawn and a new action on the merits with respect to the applicant's admitted prior art *(AAPA)* is set forth below.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated *(see Specification, Page 2, Line 4- "known transmission system" and Page 5, Line 22- "Figure 1 shows a block diagram of a prior art transmission system")*. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: the specification should be amended to include section headings in order to provide a more intelligible and clearer representation of its various sections.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-2, 4-6, 8-10, 12-14, 16-18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chai *(U.S. Patent: 6,137,915)* in view of the Applicant's admitted prior art *(hereinafter, "AAPA")*.

Regarding **claims 1, 5, 9, 13, and 17**, Chai discloses an apparatus and method for error concealment for hierarchical subband coding and decoding. Chai's system includes the following:

a transmitter for transmitting an input signal to a receiver via a transmission channel (Fig. 2, item 250; col. 4, lines 14-22),

the transmitter comprising a means for decomposing an input signal into frequency band signals (Fig. 2, items 222 (1-n) , 220 (1-n); col. 3, lines 28-35, lines 53-64),

the transmitter further comprising a first encoder for encoding the first frequency band signal into a first encoded frequency band signal and a second encoder for encoding the second frequency band signal into a second encoded frequency band signal (Fig. 2, abstract, subband coding; col. 3, lines 28-33, lines 53-64),

the transmitter being arranged for transmitting the first and second encoded frequency hand signals via the transmission channel to the receiver (Fig. 2, items 240 and 245),

the receiver comprising a first decoder for decoding the first encoded frequency band signal into a first decoded frequency band signal and a second decoder for decoding the second encoded frequency band signal into a second decoded frequency band signal (Fig. 2, items 260, 270,and 290; col. 4, lines 14-21, elementary streams),

the receiver further comprising a means for providing a single output signal from decoded subband signals into an output signal (Fig. 2, items 270, 275, 290, 295; col. 4, lines 14-22),

the receiver further comprising reconstruction means for reconstructing the second decoded frequency band signal when the second decoded frequency band signal is not available, characterized in that the reconstruction means are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band signal (Fig. 5, col. 4, lines 30-42; col. 5, lines 9-27; corrupted subband HH2 can be concealed by using uncorrupted coefficients ... from other subbands LH2 and HL2).

Although Chai teaches the concept of error recovery using other frequency band signals and teaches the concept of subband coding/decoding, Chai does not explicitly teach the use of a splitter for splitting the input signal into bands and a combiner for merging the bands to produce a single output. Such coding pre/post processing means are well-known in the coding art as is evidenced by the AAPA. In the AAPA, it is stated that the structure of Fig. 1 is "known" and "prior art" *(Specification, Pages 2 and 5)*. Fig. 1 shows that a splitter is used to divide an input signal into frequency bands that are provided to multiple encoders at a transmitter (items 20, 22, and 24). Fig. 1 also shows that a combiner is used to combine frequency bands from first and second decoders to provide a single output at a receiver (items 26, 28, and 30). The descriptions associated with Fig. 1 further describe this well-known processing (Page 5, Line 22- Page 6, Line 14).

Chai and the AAPA are analogous art because they are from a similar field of endeavor in multi-band coding systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Chai with the well-known splitter/combiner structures taught by the AAPA in order to provide a well-known and readily available means for splitting a signal into bands and combining those bands to produce an output signal, wherein, advantageously, only a low band signal is necessary for proper decoding *(Page 2, Lines 31-34; and Page 5, Line 22- Page 16, Line 14)*.

Regarding **claims 2, 6, 10, 14, and 18** Chai teaches everything claimed, as applied above (see claim 1). In addition, Chai teaches "that the reconstruction means are arranged for reconstructing the second decoded frequency band signal from the first decoded frequency band

signal by extending a bandwidth of the first decoded frequency band signal" (col. 5, lines 20-25; corrupted HH2 can be concealed by using uncorrupted coefficients ... from subbands LH2 and HL2 [extending the bandwidth]).

Regarding **claims 4, 8, 12, 16, and 20**, Chai teaches everything claimed, as applied above (see claim 1). In addition, Chai teaches "the first frequency band signal and the first encoded frequency band signal and the first decoded frequency band signal are signals having a low frequency band and in that the second frequency band signal and the second encoded frequency band signal and the second decoded frequency band signal are signals having a high frequency band" (Fig. 2, col. 3, lines 28-35; col. 4, lines 14-23, lines 31-42; e.g., LL is a low frequency band, HH is a high frequency band, etc).

6. **Claims 3, 7, 11, 15, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chai *(U.S. Patent: 6,137,915)* in view of the Applicant's admitted prior art *(hereinafter, "AAPA")*, and further in view of Zinser *(U.S. Patent: 5,384,793)*.

Regarding **claims 3, 7, 11, 15, and 19**, Chai in view of the AAPA teaches everything claimed, as applied above (see claim 1). As stated in the rejection of claim 1, Chai teaches that an adjacent subband can be used to repair a corrupted subband (col. 2, lines 9-27), but Chai does not specifically teach "that the reconstruction means are arranged for reconstructing a present frame of the second decoded frequency band signal from a present frame of the first decoded frequency band signal and from a previous frame of the second decoded frequency band signal." However, the examiner contends that this concept was well known in the art, as taught by Zinser.

In the same field of endeavor, Zinser discloses an error protection method for dynamic bit allocation sub-band coding. Zinser teaches that energies from the previous frame can be combined with energies from the adjacent energies in the current frame for synthetic regeneration (col. 3, lines 8-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chai in view of the AAPA by specifically providing features, as taught by Zinser, because it is well known in the art at the time of invention for the purpose of obtaining a better estimate by interpolating with information time [previous] as well as frequency [adjacent subband].

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: See PTO-892.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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